



## SEQUENCE LISTING

<110> KOLTERMAN, ORVILLE G.  
YOUNG, ANDREW A.

<120> NOVEL EXENDIN AGONIST FORMULATIONS AND METHODS OF ADMINISTRATION  
THEREOF

<130> 249/146US

<140> 09/889,330  
<141> 2001-12-27

<150> PCT/US00/00902  
<151> 2000-01-14

<150> US 60/116,380  
<151> 1999-01-14

<150> US 60/175,365  
<151> 2000-01-10

<160> 189

<170> PatentIn Ver. 3.2

<210> 1  
<211> 39  
<212> PRT  
<213> Heloderma horridum

<220>  
<221> MOD\_RES  
<222> (39)  
<223> AMIDATION, Position 39 is Ser-NH2

<400> 1  
His Ser Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly Ala Pro Pro Pro Ser  
35

<210> 2  
<211> 39  
<212> PRT  
<213> Heloderma suspectum

<220>  
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<222> (39)  
<223> AMIDATION, Position 39 is Ser-NH2

<400> 2

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
 20 25 30

Ser Gly Ala Pro Pro Pro Ser  
 35

<210> 3

<211> 39

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<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> VARIANT

<222> (1)

<223> His, Arg or Thr

<220>

<221> VARIANT

<222> (2)

<223> Ser, Gly, Ala or Thr

<220>

<221> VARIANT

<222> (3)

<223> Asp or Glu

<220>

<221> VARIANT

<222> (6)

<223> Phe, Tyr or naphthalanine

<220>

<221> VARIANT

<222> (7)

<223> Thr or Ser

<220>

<221> VARIANT

<222> (8)

<223> Ser or Thr

<220>

<221> VARIANT

<222> (9)

<223> Asp or Glu

<220>

<221> VARIANT

<222> (10)  
 <223> Leu, Ile, Val, pentylglycine or Met  
 /  
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 <222> (14)  
 <223> Leu, Ile, pentylglycine, Val or Met  
  
 <220>  
 <221> VARIANT  
 <222> (22)  
 <223> Phe, Tyr or naphthalanine  
  
 <220>  
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 <222> (23)  
 <223> Ile, Val, Leu, pentylglycine, tert-butylglycine or Met  
  
 <220>  
 <221> VARIANT  
 <222> (24)  
 <223> Glu or Asp  
  
 <220>  
 <221> VARIANT  
 <222> (25)  
 <223> Trp, Phe, Tyr or naphthylalanine  
  
 <220>  
 <221> VARIANT  
 <222> (31)  
 <223> independently Pro, homoproline, 3-hydroxyproline,  
 4-hydroxyproline, thioproline, N-alkylglycine,  
 N-alkylpentylglycine or N-alkylalanine  
  
 <220>  
 <221> VARIANT  
 <222> (36)..(38)  
 <223> independently Pro, homoproline, 3-hydroxyproline,  
 4-hydroxyproline, thioproline, N-alkylglycine,  
 N-alkylpentylglycine or N-alkylalanine  
  
 <220>  
 <221> VARIANT  
 <222> (39)  
 <223> Ser, Thr or Tyr  
  
 <220>  
 <223> c-term is -OH or NH<sub>2</sub>, with the proviso that the compound  
 does not have the formula of either SEQ ID NOS 1 or 2  
  
 <400> 3  
 Xaa Xaa Xaa Gly Thr Xaa Xaa Xaa Xaa Xaa Ser Lys Gln Xaa Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Xaa Xaa Xaa Xaa Leu Lys Asn Gly Gly Xaa Ser  
 20 25 30

Ser Gly Ala Xaa Xaa Xaa Xaa  
35

<210> 4

<211> 38

<212> PRT

<213> Artificial Sequence

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<223> synthetic construct

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<220>

<221> VARIANT

<222> (2)

<223> Ser, Gly, Ala or Thr

<220>

<221> VARIANT

<222> (3)

<223> Asp or Glu

<220>

<221> VARIANT

<222> (5)

<223> Ala or Thr

<220>

<221> VARIANT

<222> (6)

<223> Ala, Phe, Tyr or naphthylalanine

<220>

<221> VARIANT

<222> (7)

<223> Thr or Ser

<220>

<221> VARIANT

<222> (8)

<223> Ala, Ser or Thr

<220>

<221> VARIANT

<222> (9)

<223> Asp or Glu

<220>

<221> VARIANT

<222> (10)

<223> Ala, Leu, Ile, Val, pentylglycine or Met

<220>  
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<222> (11)  
<223> Ala or Ser

<220>  
<221> VARIANT  
<222> (12)  
<223> Ala or Lys

<220>  
<221> VARIANT  
<222> (13)  
<223> Ala or Gln

<220>  
<221> VARIANT  
<222> (14)  
<223> Ala, Leu, Ile, pentylglycine, Val or Met

<220>  
<221> VARIANT  
<222> (15)..(17)  
<223> Ala or Glu

<220>  
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<223> Ala or Val

<220>  
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<223> Ala or Arg

<220>  
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<222> (21)  
<223> Ala or Leu

<220>  
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<222> (22)  
<223> Ala, Phe, Tyr or naphthylalanine

<220>  
<221> VARIANT  
<222> (23)  
<223> Ile, Val, Leu, pentylglycine, tert-butylglycine or Met

<220>  
<221> VARIANT  
<222> (24)  
<223> Ala, Glu or Asp

<220>  
<221> VARIANT

<222> (25)  
 <223> Ala, Trp, Phe, Tyr or naphthylalanine  
  
 <220>  
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 <222> (26)  
 <223> Ala or Leu  
  
 <220>  
 <221> VARIANT  
 <222> (27)  
 <223> Ala or Lys  
  
 <220>  
 <221> VARIANT  
 <222> (28)  
 <223> Ala or Asn  
  
 <220>  
 <221> MOD\_RES  
 <222> (31)  
 <223> Pro, homoproline, 3Hyp, 4Hyp, thioproline, N-alkylglycine,  
 N-alkylpentylglycine or N-alkylalanine  
  
 <220>  
 <221> MOD\_RES  
 <222> (36)..(38)  
 <223> Pro, homoproline, 3Hyp, 4Hyp, thioproline, N-alkylglycine,  
 N-alkylpentylglycine or N-alkylalanine  
  
 <220>  
 <223> residues 29-38 may or may not be present according to the  
 specification as filed; c-term is -OH or NH2  
  
 <400> 4  
 Xaa Xaa Xaa Gly Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 1 5 10 15  
  
 Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gly Xaa Ser  
 20 25 30  
  
 Ser Gly Ala Xaa Xaa Xaa  
 35  
  
 <210> 5  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence  
  
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 <223> synthetic construct  
  
 <220>  
 <221> VARIANT  
 <222> (1)  
 <223> His, Arg, Tyr, Ala, norvaline, Val, or norleucine

<220>  
<221> VARIANT  
<222> (2)  
<223> Ser, Gly, Ala, or Thr

<220>  
<221> VARIANT  
<222> (3)  
<223> Ala, Asp, or Glu

<220>  
<221> VARIANT  
<222> (4)  
<223> Ala, norvaline, Val, norleucine or Gly

<220>  
<221> VARIANT  
<222> (5)  
<223> Ala or Thr

<220>  
<221> VARIANT  
<222> (6)  
<223> Phe, Tyr or naphthylalanine

<220>  
<221> VARIANT  
<222> (7)  
<223> Thr or Ser

<220>  
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<222> (8)  
<223> Ala, Ser or Thr

<220>  
<221> VARIANT  
<222> (9)  
<223> Ala, Norvaline, Val, Norleucine, Asp or Glu

<220>  
<221> VARIANT  
<222> (10)  
<223> Ala, Leu, Ile, Val, pentylglycine or Met

<220>  
<221> VARIANT  
<222> (11)  
<223> Ala or Ser

<220>  
<221> VARIANT  
<222> (12)  
<223> Ala or Lys

<220>  
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<223> Ala or Gln

<220>  
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<222> (14)  
<223> Ala, Leu, Ile, pentylglycine, Val or Met

<220>  
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<222> (15)..(17)  
<223> Ala or Glu

<220>  
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<223> Ala or Val

<220>  
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<222> (20)  
<223> Ala or Arg

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<222> (21)  
<223> Ala or Leu

<220>  
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<222> (22)  
<223> Phe, Tyr or naphthylalanine

<220>  
<221> VARIANT  
<222> (23)  
<223> Ile, Val, Leu, pentylglycine, tert-butylglycine or  
Met

<220>  
<221> VARIANT  
<222> (24)  
<223> Ala, Glu or Asp

<220>  
<221> VARIANT  
<222> (25)  
<223> Ala, Trp, Phe, Tyr or naphthylalanine

<220>  
<221> VARIANT  
<222> (26)  
<223> Ala or Leu



<220>  
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 <222> (27)  
 <223> Ala or Lys

<220>  
 <221> VARIANT  
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 <223> Ala or Asn

<220>  
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 <222> (31)  
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 N-alkylpentylglycine or N-alkylalanine

<220>  
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 <223> Pro, homoproline, 3Hyp, 4Hyp, thioproline, N-alkylglycine,  
 N-alkylpentylglycine or N-alkylalanine

<220>  
 <223> residues 29-38 may or may not be present according to the  
 specification as filed; c-term is -OH or NH2

<400> 5  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
   1                  5                  10                  15  
 Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gly Xaa Ser  
                   20                  25                  30  
 Ser Gly Ala Xaa Xaa Xaa Xaa  
                   35

<210> 6  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic construct

<400> 6  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
   1                  5                  10                  15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly  
                   20                  25                  30

<210> 7  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> MOD\_RES

<222> (30)

<223> AMIDATION, Position 30 is Gly-NH2

<400> 7

His	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly
			20					25					30

<210> 8

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 8

His	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Ala	Ile	Glu	Phe	Leu	Lys	Asn
			20					25			

<210> 9

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 9

His	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn	Gly	Gly	Pro	Ser
			20					25					30		

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 10

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 10

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 11

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 11

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 12

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 12

Tyr	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly	Pro	Ser
			20					25					30		

Ser	Gly	Ala	Pro	Pro	Pro	Ser
			35			

<210> 13

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Tyr-NH2

<400> 13

His	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly	Pro	Ser
			20					25					30		

Ser	Gly	Ala	Pro	Pro	Pro	Tyr
			35			

<210> 14

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

&lt;400&gt; 14

His Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
 20 25 30

Ser Gly Ala Pro Pro Pro Ser  
 35

&lt;210&gt; 15

&lt;211&gt; 39

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic construct

&lt;220&gt;

&lt;221&gt; MOD\_RES

&lt;222&gt; (39)

&lt;223&gt; AMIDATION, Position 39 is Ser-NH2

&lt;220&gt;

&lt;221&gt; VARIANT

&lt;222&gt; (6)

&lt;223&gt; Xaa is naphthylalanine

&lt;400&gt; 15

His Gly Glu Gly Thr Xaa Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
 20 25 30

Ser Gly Ala Pro Pro Pro Ser  
 35

&lt;210&gt; 16

&lt;211&gt; 39

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic construct

&lt;220&gt;

&lt;221&gt; MOD\_RES

&lt;222&gt; (39)

&lt;223&gt; AMIDATION, Position 39 is Ser-NH2

&lt;400&gt; 16

His Gly Glu Gly Thr Phe Ser Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
                   20                  25                  30

Ser Gly Ala Pro Pro Pro Ser  
                   35

<210> 17  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (39)  
 <223> AMIDATION, Position 39 is Ser-NH2

<400> 17  
 His Gly Glu Gly Thr Phe Ser Thr Asp Leu Ser Lys Gln Met Glu Glu  
       1                  5                  10                  15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
                   20                  25                  30

Ser Gly Ala Pro Pro Pro Ser  
                   35

<210> 18  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (39)  
 <223> AMIDATION, Position 39 is Ser-NH2

<400> 18  
 His Gly Glu Gly Thr Phe Thr Thr Asp Leu Ser Lys Gln Met Glu Glu  
       1                  5                  10                  15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
                   20                  25                  30

Ser Gly Ala Pro Pro Pro Ser  
                   35

<210> 19  
 <211> 39

<212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (39)  
 <223> AMIDATION, Position 39 is Ser-NH2

<400> 19  
 His Gly Glu Gly Thr Phe Thr Ser Glu Leu Ser Lys Gln Met Glu Glu  
           1                          5                          10                          15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
                           20                          25                          30  
 Ser Gly Ala Pro Pro Pro Ser  
                           35

<210> 20  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (39)  
 <223> AMIDATION, Position 39 is Ser-NH2

<220>  
 <221> VARIANT  
 <222> (10)  
 <223> Xaa is pentylglycine

<400> 20  
 His Gly Glu Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Met Glu Glu  
           1                          5                          10                          15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
                           20                          25                          30  
 Ser Gly Ala Pro Pro Pro Ser  
                           35

<210> 21  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (39)  
 <223> AMIDATION, Position 39 is Ser-NH2

<220>  
 <221> VARIANT  
 <222> (10)  
 <223> Xaa is pentylglycine

<400> 21  
 His Gly Glu Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Leu Glu Glu  
           1                          5                          10                          15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
                           20                          25                          30

Ser Gly Ala Pro Pro Pro Ser  
                           35

<210> 22  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (39)  
 <223> AMIDATION, Position 39 is Ser-NH2

<220>  
 <221> VARIANT  
 <222> (14)  
 <223> Xaa is pentylglycine

<400> 22  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Glu  
           1                          5                          10                          15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
                           20                          25                          30

Ser Gly Ala Pro Pro Pro Ser  
                           35

<210> 23  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence



<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<220>

<221> VARIANT

<222> (14)

<223> Xaa is pentylglycine

<400> 23

His	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Xaa	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn	Gly	Gly	Pro	Ser
			20					25					30		

Ser	Gly	Ala	Pro	Pro	Pro	Ser
			35			

<210> 24

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<220>

<221> VARIANT

<222> (22)

<223> Xaa is naphthylalanine

<400> 24

His	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Xaa	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly	Pro	Ser
			20					25					30		

Ser	Gly	Ala	Pro	Pro	Pro	Ser
			35			

<210> 25

<211> 39

<212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (39)  
 <223> AMIDATION, Position 39 is Ser-NH2

<400> 25  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
           1                          5                          10                          15  
 Glu Ala Val Arg Leu Phe Val Glu Trp Leu Lys Asn Gly Gly Pro Ser  
                           20                          25                          30  
 Ser Gly Ala Pro Pro Pro Ser  
                           35

<210> 26  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (39)  
 <223> AMIDATION, Position 39 is Ser-NH2

<400> 26  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
           1                          5                          10                          15  
 Glu Ala Val Arg Leu Phe Val Glu Phe Leu Lys Asn Gly Gly Pro Ser  
                           20                          25                          30  
 Ser Gly Ala Pro Pro Pro Ser  
                           35

<210> 27  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> VARIANT

<222> (23)  
 <223> Xaa at Position 23 is tertiary-butylglycine

<220>  
 <221> MOD\_RES  
 <222> (39)  
 <223> AMIDATION, Position 39 is Ser-NH2

<400> 27  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
           1                  5                  10                  15  
 Glu Ala Val Arg Leu Phe Xaa Glu Trp Leu Lys Asn Gly Gly Pro Ser  
                   20                  25                  30  
 Ser Gly Ala Pro Pro Pro Ser  
                   35

<210> 28  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> VARIANT  
 <222> (23)  
 <223> Xaa at position 23 is tertiary-butylglycine

<220>  
 <221> MOD\_RES  
 <222> (39)  
 <223> AMIDATION, Position 39 is Ser-NH2

<400> 28  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
           1                  5                  10                  15  
 Glu Ala Val Arg Leu Phe Xaa Glu Phe Leu Lys Asn Gly Gly Pro Ser  
                   20                  25                  30  
 Ser Gly Ala Pro Pro Pro Ser  
                   35

<210> 29  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

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<220>
<221> MOD_RES
<222> (39)
<223> AMIDATION, Position 39 is Ser-NH2

<400> 29
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1             5             10             15

Glu Ala Val Arg Leu Phe Ile Asp Trp Leu Lys Asn Gly Gly Pro Ser
          20             25             30

Ser Gly Ala Pro Pro Pro Ser
          35

<210> 30
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<220>
<221> MOD_RES
<222> (39)
<223> AMIDATION, position 39 is Ser-NH2

<400> 30
His Ala Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1             5             10             15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
          20             25             30

Ser Gly Ala Pro Pro Pro Ser
          35

<210> 31
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<220>
<221> VARIANT
<222> (31)
<223> Xaa at position 31 is thioproline

<220>
<221> VARIANT
<222> (36)..(38)
<223> Xaa at positions 36, 37, and 38 is thioproline

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<220>  
 <221> MOD\_RES  
 <222> (39)  
 <223> AMIDATION, Position 39 is Ser-NH2  
  
 <400> 31  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
   1                  5                  10                  15  
  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
                   20                  25                  30  
  
 Ser Gly Ala Xaa Xaa Xaa Ser  
                   35  
  
  
 <210> 32  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic construct  
  
 <220>  
 <221> VARIANT  
 <222> (36)..(38)  
 <223> Xaa at positions 36, 37, and 38 is thioproline  
  
 <220>  
 <221> MOD\_RES  
 <222> (39)  
 <223> AMIDATION, Position 39 is Ser-NH2  
  
 <400> 32  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
   1                  5                  10                  15  
  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
                   20                  25                  30  
  
 Ser Gly Ala Xaa Xaa Xaa Ser  
                   35  
  
  
 <210> 33  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic construct  
  
 <220>  
 <221> VARIANT

<222> (31)

<223> Xaa at position 31 is homoproline

<220>

<221> VARIANT

<222> (36)..(38)

<223> Xaa at positions 36, 37, and 38 is homoproline

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 33

His	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly	Xaa	Ser
			20					25					30		

Ser	Gly	Ala	Xaa	Xaa	Xaa	Ser
			35			

<210> 34

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> VARIANT

<222> (36)..(38)

<223> Xaa at positions 36, 37, and 38 is homoproline

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 34

His	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly	Pro	Ser
			20					25					30		

Ser	Gly	Ala	Xaa	Xaa	Xaa	Ser
			35			

<210> 35

<211> 39

<212> PRT

<213> Artificial Sequence

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<220>
<223> Synthetic construct

<220>
<221> VARIANT
<222> (31)
<223> Xaa at position 31 is thioproline

<220>
<221> VARIANT
<222> (36)..(38)
<223> Xaa at positions 36, 37, and 38 is thioproline

<220>
<221> MOD_RES
<222> (39)
<223> AMIDATION, Position 39 is Ser-NH2

<400> 35
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1             5             10             15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Xaa Ser
      20             25             30
Ser Gly Ala Xaa Xaa Xaa Ser
      35

<210> 36
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<220>
<221> VARIANT
<222> (31)
<223> Xaa at position 31 is homoproline

<220>
<221> VARIANT
<222> (36)..(38)
<223> Xaa at positions 36, 37, and 38 is homoproline

<220>
<221> MOD_RES
<222> (39)
<223> AMIDATION, Position 39 is Ser-NH2

<400> 36
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1             5             10             15

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Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Xaa Ser  
                   20                  25                  30

Ser Gly Ala Xaa Xaa Xaa Ser  
                   35

<210> 37  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> VARIANT  
 <222> (31)  
 <223> Xaa at position 31 is N-methylalanine

<220>  
 <221> VARIANT  
 <222> (36)..(38)  
 <223> Xaa at positions 36, 37, and 38 is N-methylalanine

<220>  
 <221> MOD\_RES  
 <222> (39)  
 <223> AMIDATION, Position 39 is Ser-NH2

<400> 37  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
       1                  5                  10                  15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
                   20                  25                  30

Ser Gly Ala Xaa Xaa Xaa Ser  
                   35

<210> 38  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> VARIANT  
 <222> (36)..(38)  
 <223> Xaa at positions 36, 37, and 38 is N-methylalanine

<220>  
 <221> MOD\_RES



<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 38

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser  
35

<210> 39

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> VARIANT

<222> (31)

<223> Xaa at position 31 is N-methylalanine

<220>

<221> VARIANT

<222> (36)..(38)

<223> Xaa at positions 36, 37, and 38 is N-methylalanine

<220>

<221> MOD\_RES

<222> (39)

<223> AMIDATION, Position 39 is Ser-NH2

<400> 39

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser  
35

<210> 40

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 40

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 41

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 41

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 42

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 42

His Ala Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 43

<211> 28

<212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 43  
 His Gly Glu Gly Ala Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
 20 25

<210> 44  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 44  
 His Gly Glu Gly Thr Ala Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
 20 25

<210> 45  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 45  
 His Gly Glu Gly Thr Phe Thr Ala Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
                   20                                  25

<210> 46  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 46  
 His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Leu Glu Glu  
 1                                  5                                  10                                  15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
                   20                                  25

<210> 47  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 47  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ala Lys Gln Leu Glu Glu  
 1                                  5                                  10                                  15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
                   20                                  25

<210> 48  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 48

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Ala Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 49

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 49

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Ala Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 50

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 50

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Ala Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 51

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 51

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Ala Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 52

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 52

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Ala  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 53

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 53

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Ala Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 54  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 54  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Ala Arg Leu Phe Ile Glu Phe Leu Lys Asn  
 20 25

<210> 55  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 55  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Ala Leu Phe Ile Glu Phe Leu Lys Asn  
 20 25

<210> 56  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 56

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Ala Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 57

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 57

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Ala Phe Leu Lys Asn  
20 25

<210> 58

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 58

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Ala Leu Lys Asn  
20 25

<210> 59

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct



<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 59  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Ala Lys Asn  
 20 25

<210> 60  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 60  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Ala Asn  
 20 25

<210> 61  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Ala-NH2

<400> 61  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Ala  
 20 25

<210> 62  
 <211> 38  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (38)  
 <223> AMIDATION, Position 38 is Pro-NH2

<400> 62  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
 20 25 30

Ser Gly Ala Pro Pro Pro  
 35

<210> 63  
 <211> 38  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (38)  
 <223> AMIDATION, Position 38 is Pro-NH2

<400> 63  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
 20 25 30

Ser Gly Ala Pro Pro Pro  
 35

<210> 64  
 <211> 37  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (37)  
 <223> AMIDATION, Position 37 is Pro-NH2

<400> 64  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
 20 25 30  
 Ser Gly Ala Pro Pro  
 35

<210> 65  
 <211> 37  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (37)  
 <223> AMIDATION, Position 37 is Pro-NH2

<400> 65  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
 20 25 30  
 Ser Gly Ala Pro Pro  
 35

<210> 66  
 <211> 36  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (36)  
 <223> AMIDATION, Position 36 is Pro-NH2

<400> 66  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
                   20                  25                  30

Ser Gly Ala Pro  
                   35

<210> 67  
 <211> 36  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (36)  
 <223> AMIDATION, Position 36 is Pro-NH2

<400> 67  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1                  5                  10                  15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
                   20                  25                  30

Ser Gly Ala Pro  
                   35

<210> 68  
 <211> 35  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (35)  
 <223> AMIDATION, Position 35 is Ala-NH2

<400> 68  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1                  5                  10                  15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
                   20                  25                  30

Ser Gly Ala  
                   35

<210> 69  
 <211> 35

<212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (35)  
 <223> AMIDATION, Position 35 is Ala-NH2

<400> 69  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
 20 25 30  
 Ser Gly Ala  
 35

<210> 70  
 <211> 34  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (34)  
 <223> AMIDATION, Position 34 is Gly-NH2

<400> 70  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
 20 25 30  
 Ser Gly

<210> 71  
 <211> 34  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES

<222> (34)

<223> AMIDATION, Position 34 is Gly-NH2

<400> 71

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly

<210> 72

<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (33)

<223> AMIDATION, Position 33 is Ser-NH2

<400> 72

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser

<210> 73

<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (33)

<223> AMIDATION, Position 33 is Ser-NH2

<400> 73

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 , 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser

<210> 74  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (32)  
 <223> AMIDATION, Position 32 is Ser-NH2

<400> 74  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
 20 25 30

<210> 75  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (32)  
 <223> AMIDATION, Position 32 is Ser-NH2

<400> 75  
 His Gly Glu Gly Thr Phe Thr Sér Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
 20 25 30

<210> 76  
 <211> 31  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES

<222> (31)

<223> AMIDATION, Position 31 is Pro-NH2

<400> 76

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro  
20 25 30

<210> 77

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (31)

<223> AMIDATION, Position 31 is Pro-NH2

<400> 77

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro  
20 25 30

<210> 78

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (30)

<223> AMIDATION, Position 30 is Gly-NH2

<400> 78

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly  
20 25 30

<210> 79

<211> 29

<212> PRT

<213> Artificial Sequence



<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (29)

<223> AMIDATION, Position 29 is Gly-NH2

<400> 79

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly  
20 25

<210> 80

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (29)

<223> AMIDATION, Position 29 is Gly-NH2

<400> 80

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly  
20 25

<210> 81

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> VARIANT

<222> (31)

<223> Xaa is thioproline

<220>

<221> VARIANT

<222> (36)..(38)

<223> Xaa is thioproline

<220>  
 <221> MOD\_RES  
 <222> (38)  
 <223> AMIDATION, Position 38 is thioproline-NH2

<400> 81  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
 20 25 30  
 Ser Gly Ala Xaa Xaa Xaa  
 35

<210> 82  
 <211> 38  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> VARIANT  
 <222> (36)..(38)  
 <223> Xaa is thioproline

<220>  
 <221> MOD\_RES  
 <222> (38)  
 <223> AMIDATION, Position 38 is thioproline-NH2

<400> 82  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
 20 25 30  
 Ser Gly Ala Xaa Xaa Xaa  
 35

<210> 83  
 <211> 37  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> VARIANT  
 <222> (31)  
 <223> Xaa is N-methylalanine

<220>  
 <221> MOD\_RES  
 <222> (37)  
 <223> AMIDATION, Position 37 is Pro-NH2  
  
 <400> 83  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
 20 25 30  
 Ser Gly Ala Pro Pro  
 35

<210> 84  
 <211> 37  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> VARIANT  
 <222> (31)  
 <223> Xaa is N-methylalanine

<220>  
 <221> VARIANT  
 <222> (36)..(37)  
 <223> Xaa is N-methylalanine

<220>  
 <221> MOD\_RES  
 <222> (37)  
 <223> AMIDATION, Position 37 is N-methylalanine-NH2

<400> 84  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
 20 25 30  
 Ser Gly Ala Xaa Xaa  
 35

<210> 85  
 <211> 37  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> VARIANT  
 <222> (31)  
 <223> Xaa is homoproline

<220>  
 <221> VARIANT  
 <222> (36)..(37)  
 <223> Xaa is homoproline

<220>  
 <221> MOD\_RES  
 <222> (37)  
 <223> AMIDATION, Position 37 is homoproline-NH2

<400> 85  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
 20 25 30  
 Ser Gly Ala Xaa Xaa  
 35

<210> 86  
 <211> 36  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> VARIANT  
 <222> (31)  
 <223> Xaa is homoproline

<220>  
 <221> VARIANT  
 <222> (36)  
 <223> Xaa is homoproline

<220>  
 <221> MOD\_RES  
 <222> (36)  
 <223> AMIDATION, Position 36 is homoproline-NH2

<400> 86  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
                   20                  25                  30

Ser Gly Ala Xaa  
                   35

<210> 87  
 <211> 35  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (35)  
 <223> AMIDATION, Position 35 is Ala-NH2

<400> 87  
 Arg Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1                  5                  10                  15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
                   20                  25                  30

Ser Gly Ala  
                   35

<210> 88  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (30)  
 <223> AMIDATION, Position 30 is Gly-NH2

<400> 88  
 His Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1                  5                  10                  15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly  
                   20                  25                  30

<210> 89  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

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<220>
<223> Synthetic construct

<220>
<221> VARIANT
<222> (6)
<223> Xaa is naphthylalanine

<220>
<221> MOD_RES
<222> (28)
<223> AMIDATION, Position 28 is Asn-NH2

<400> 89
His Gly Glu Gly Thr Xaa Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1          5          10          15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
          20          25

<210> 90
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<220>
<221> MOD_RES
<222> (28)
<223> AMIDATION, Position 28 is Asn-NH2

<400> 90
His Gly Glu Gly Thr Phe Ser Ser Asp Leu Ser Lys Gln Met Glu Glu
1          5          10          15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
          20          25

<210> 91
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<220>
<221> MOD_RES
<222> (28)
<223> AMIDATION, Position 28 is Asn-NH2

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<400> 91

His Gly Glu Gly Thr Phe Ser Thr Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 92

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 92

His Gly Glu Gly Thr Phe Thr Ser Glu Leu Ser Lys Gln Met Ala Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 93

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> VARIANT

<222> (10)

<223> Xaa is pentylglycine

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 93

His Gly Glu Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 94

<211> 28

<212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> VARIANT  
 <222> (22)  
 <223> Xaa is naphthylalanine

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 94  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Xaa Ile Glu Phe Leu Lys Asn  
 20 25

<210> 95  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> VARIANT  
 <222> (23)  
 <223> Xaa is tertiary-butylglycine

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 95  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Xaa Glu Trp Leu Lys Asn  
 20 25

<210> 96  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct



<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 96  
 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Asp Phe Leu Lys Asn  
 20 25

<210> 97  
 <211> 33  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (33)  
 <223> AMIDATION, Position 33 is Ser-NH2

<400> 97  
 His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
 20 25 30

Ser

<210> 98  
 <211> 29  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (29)  
 <223> AMIDATION, Position 29 is Gly-NH2

<400> 98  
 His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly  
 20 25

<210> 99  
 <211> 37  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> VARIANT  
 <222> (31)  
 <223> Xaa is homoproline

<220>  
 <221> VARIANT  
 <222> (36)..(37)  
 <223> Xaa is homoproline

<220>  
 <221> MOD\_RES  
 <222> (37)  
 <223> AMIDATION, Position 37 is homoproline-NH2

<400> 99  
 His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
 20 25 30  
 Ser Gly Ala Xaa Xaa  
 35

<210> 100  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 100  
 Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
 20 25

<210> 101  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 101  
 His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1                               5                               10                               15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
                               20                               25

<210> 102  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 102  
 His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1                               5                               10                               15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
                               20                               25

<210> 103  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

&lt;400&gt; 103

His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu  
 1                               5                               10                               15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
                               20                               25

&lt;210&gt; 104

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic construct

&lt;220&gt;

&lt;221&gt; MOD\_RES

&lt;222&gt; (28)

&lt;223&gt; AMIDATION, Position 28 is Asn-NH2

&lt;400&gt; 104

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1                               5                               10                               15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
                               20                               25

&lt;210&gt; 105

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence (

&lt;220&gt;

&lt;223&gt; Synthetic construct

&lt;220&gt;

&lt;221&gt; MOD\_RES

&lt;222&gt; (28)

&lt;223&gt; AMIDATION, Position 28 is Asn-NH2

&lt;400&gt; 105

His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1                               5                               10                               15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
                               20                               25

&lt;210&gt; 106

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic construct

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<220>
<221> MOD_RES
<222> (28)
<223> AMIDATION, Position 28 is Asn-NH2

<400> 106
His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1          5          10          15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
          20          25

<210> 107
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<220>
<221> MOD_RES
<222> (28)
<223> AMIDATION, Position 28 is Asn-NH2

<400> 107
His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu
1          5          10          15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
          20          25

<210> 108
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<220>
<221> MOD_RES
<222> (28)
<223> AMIDATION, Position 28 is Asn-NH2

<400> 108
His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Met Glu Glu
1          5          10          15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
          20          25

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<210> 109  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 109  
 Ala Ala Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
 20 25

<210> 110  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 110  
 Ala Ala Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
 20 25

<210> 111  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 111

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 112

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 112

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 113

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 113

Ala Gly Asp Gly Ala Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 114

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

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<220>
<221> MOD_RES
<222> (28)
<223> AMIDATION, Position 28 is Asn-NH2

<400> 114
Ala Gly Asp Gly Ala Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1          5          10          15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
          20          25

<210> 115
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<220>
<221> VARIANT
<222> (6)
<223> Xaa is naphthylalanine

<220>
<221> MOD_RES
<222> (28)
<223> AMIDATION, Position 28 is Asn-NH2

<400> 115
Ala Gly Asp Gly Thr Xaa Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1          5          10          15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
          20          25

<210> 116
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<220>
<221> VARIANT
<222> (6)
<223> Xaa is naphthylalanine

<220>
<221> MOD_RES
<222> (28)
<223> AMIDATION, Position 28 is Asn-NH2

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<400> 116

Ala Gly Asp Gly Thr Xaa Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 117

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 117

Ala Gly Asp Gly Thr Phe Ser Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 118

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 118

Ala Gly Asp Gly Thr Phe Ser Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 119

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 119

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ala	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn
			20					25			

<210> 120

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 120

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ala	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn
			20					25			

<210> 121

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 121

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Ala	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn
			20					25			

<210> 122  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 122  
 Ala Gly Asp Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
 20 25

<210> 123  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 123  
 Ala Gly Asp Gly Thr Phe Thr Ser Glu Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
 20 25

<210> 124  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

&lt;400&gt; 124

Ala Gly Asp Gly Thr Phe Thr Ser Glu Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
 20 25

&lt;210&gt; 125

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic construct

&lt;220&gt;

&lt;221&gt; MOD\_RES

&lt;222&gt; (28)

&lt;223&gt; AMIDATION, Position 28 is Asn-NH2

&lt;400&gt; 125

Ala Gly Asp Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Met Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
 20 25

&lt;210&gt; 126

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic construct

&lt;220&gt;

&lt;221&gt; MOD\_RES

&lt;222&gt; (28)

&lt;223&gt; AMIDATION, Position 28 is Asn-NH2

&lt;400&gt; 126

Ala Gly Asp Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Leu Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
 20 25

&lt;210&gt; 127

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic construct

<220>  
 <221> VARIANT  
 <222> (10)  
 <223> Xaa is pentylglycine

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 127  
 Ala Gly Asp Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
 20 25

<210> 128  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> VARIANT  
 <222> (10)  
 <223> Xaa is pentylglycine

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 128  
 Ala Gly Asp Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
 20 25

<210> 129  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 129

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ala Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 130

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 130

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ala Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 131

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 131

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Ala Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 132

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 132

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Ala Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 133

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 133

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Ala Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 134

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 134

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Ala Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 135  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 135  
 Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Ala Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
 20 25

<210> 136  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 136  
 Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Ala Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
 20 25

<210> 137  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> VARIANT  
 <222> (14)  
 <223> Xaa is pentylglycine



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<220>
<221> MOD_RES
<222> (28)
<223> AMIDATION, Position 28 is Asn-NH2

<400> 137
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Glu
1           5           10           15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
          20           25

<210> 138
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<220>
<221> VARIANT
<222> (14)
<223> Xaa is pentylglycine

<220>
<221> MOD_RES
<222> (28)
<223> AMIDATION, Position 28 is Asn-NH2

<400> 138
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Glu
1           5           10           15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
          20           25

<210> 139
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic construct

<220>
<221> MOD_RES
<222> (28)
<223> AMIDATION, Position 28 is Asn-NH2

<400> 139
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Ala Glu
1           5           10           15

```

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
                   20                                  25

<210> 140  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 140  
 Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Ala Glu  
 1                                  5                                  10                                  15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
                   20                                  25

<210> 141  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 141  
 Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ala  
 1                                  5                                  10                                  15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
                   20                                  25

<210> 142  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 142

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Ala  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 143

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 143

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Ala Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 144

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 144

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Ala Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 145

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 145

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Ala Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 146

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 146

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Ala Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 147

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 147

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Ala Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 148  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 148  
 Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Ala Leu Phe Ile Glu Phe Leu Lys Asn  
 20 25

<210> 149  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 149  
 Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Ala Phe Ile Glu Trp Leu Lys Asn  
 20 25

<210> 150  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 150  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Ala Phe Ile Glu Phe Leu Lys Asn  
20 25

```
<210> 151
<211> 28
<212> PRT
<213> Artificial Sequence
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<220>  
<223> Synthetic construct

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<220>
<221> VARIANT
<222> (22)
<223> Xaa is naphthylalanine
```

```

<220>
<221> MOD_RES
<222> (28)
<223> AMIDATION, Position 28 is Asn-NH2

```

<400> 151  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1                  5                  10                  15

Glu Ala Val Arg Leu Xaa Ile Glu Trp Leu Lys Asn  
20 25

```
<210> 152
<211> 28
<212> PRT
<213> Artificial Sequence
```

<220>  
<223> Synthetic construct

```
<220>
<221> VARIANT
<222> (22)
<223> Xaa is naphthylalanine
```

```
<220>
<221> MOD_RES
<222> (28)
<223> AMIDATION, Position 28 is Asn-NH2
```

<400> 152  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1                  5                  10                  15

Glu Ala Val Arg Leu Xaa Ile Glu Phe Leu Lys Asn  
                   20                                  25

<210> 153  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 153  
 Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1                          5                          10                          15

Glu Ala Val Arg Leu Phe Val Glu Trp Leu Lys Asn  
                   20                                  25

<210> 154  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 154  
 Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1                          5                          10                          15

Glu Ala Val Arg Leu Phe Val Glu Phe Leu Lys Asn  
                   20                                  25

<210> 155  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> VARIANT

<222> (23)

<223> Xaa is tertiary-butylglycine

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 155

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Xaa	Glu	Trp	Leu	Lys	Asn
			20					25			

<210> 156

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> VARIANT

<222> (23)

<223> Xaa is tertiary-butylglycine

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2

<400> 156

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Xaa	Glu	Phe	Leu	Lys	Asn
			20					25			

<210> 157

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (28)

<223> AMIDATION, Position 28 is Asn-NH2



```
<400> 157
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1          5          10          15
```

Glu Ala Val Arg Leu Phe Ile Asp Trp Leu Lys Asn  
20 25

```
<210> 158
<211> 28
<212> PRT
<213> Artificial Sequence
```

<220>  
<223> Synthetic construct

```
<220>
<221> MOD_RES
<222> (28)
<223> AMIDATION, Position 28 is Asn-NH2
```

<400> 158  
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1                  5                  10                  15

Glu Ala Val Arg Leu Phe Ile Asp Phe Leu Lys Asn  
20 25

```
<210> 159
<211> 28
<212> PRT
<213> Artificial Sequence
```

<220>  
<223> Synthetic construct

```
<220>
<221> MOD_RES
<222> (28)
<223> AMIDATION, Position 28 is Asn-NH2
```

```
<400> 159
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1          5          10          15
```

Glu Ala Val Arg Leu Phe Ile Glu Ala Leu Lys Asn  
20 25

```
<210> 160
<211> 28
<212> PRT
<213> Artificial Sequence
```

<220>  
<223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 160  
 Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Ala Leu Lys Asn  
 20 25

<210> 161  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 161  
 Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Ala Lys Asn  
 20 25

<210> 162  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (28)  
 <223> AMIDATION, Position 28 is Asn-NH2

<400> 162  
 Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Ala Lys Asn  
 20 25

<220>  
<223> Synthetic construct

```
<400> 163
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1          5          10          15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Ala Asn
          20          25
```

<220>  
<223> Synthetic construct

```
<400> 164
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1          5          10         15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Ala Asn
          20         25
```

<220>  
<223> Synthetic construct

```
<220>
<221> MOD_RES
<222> (28)
<223> AMIDATION, Position 28 is Ala-NH2
```

&lt;400&gt; 165

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Ala  
 20 25

&lt;210&gt; 166

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic construct

&lt;220&gt;

&lt;221&gt; MOD\_RES

&lt;222&gt; (28)

&lt;223&gt; AMIDATION, Position 28 is Ala-NH2

&lt;400&gt; 166

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Ala  
 20 25

&lt;210&gt; 167

&lt;211&gt; 38

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic construct

&lt;220&gt;

&lt;221&gt; MOD\_RES

&lt;222&gt; (38)

&lt;223&gt; AMIDATION, Position 38 is Pro-NH2

&lt;400&gt; 167

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
 20 25 30

Ser Gly Ala Pro Pro Pro  
 35

&lt;210&gt; 168

&lt;211&gt; 38

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (38)

<223> AMIDATION, Position 38 is Pro-NH2

<400> 168

His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro  
35

<210> 169

<211> 37

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (37)

<223> AMIDATION, Position 37 is Pro-NH2

<400> 169

His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro  
35

<210> 170

<211> 36

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> MOD\_RES

<222> (36)

<223> AMIDATION, Position 36 is Pro-NH2

&lt;400&gt; 170

His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
 20 25 30

Ser Gly Ala Pro  
 35

&lt;210&gt; 171

&lt;211&gt; 36

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic construct

&lt;220&gt;

&lt;221&gt; MOD\_RES

&lt;222&gt; (36)

&lt;223&gt; AMIDATION, Position 36 is Pro-NH2

&lt;400&gt; 171

Ala Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Leu Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
 20 25 30

Ser Gly Ala Pro  
 35

&lt;210&gt; 172

&lt;211&gt; 35

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic construct

&lt;220&gt;

&lt;221&gt; MOD\_RES

&lt;222&gt; (35)

&lt;223&gt; AMIDATION, Position 35 is Ala-NH2

&lt;400&gt; 172

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
 20 25 30

Ser Gly Ala  
 35

```
<210> 173
<211> 35
<212> PRT
<213> Artificial Sequence
```

<220>  
<223> Synthetic construct

```
<220>
<221> MOD_RES
<222> (35)
<223> AMIDATION, Position 35 is Ala-NH2
```

```
<400> 173
His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1          5          10          15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
          20          25          30

Ser Gly Ala
          35
```

```
<210> 174
<211> 34
<212> PRT
<213> Artificial Sequence
```

<220>  
<223> Synthetic construct

```
<220>
<221> MOD_RES
<222> (34)
<223> AMIDATION, Position 34 is Gly-NH2
```

```

<400> 174
His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1          5          10          15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
          20          25          30

Ser Gly

```

```
<210> 175
<211> 33
<212> PRT
<213> Artificial Sequence
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<220>  
<223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (33)  
 <223> AMIDATION, Position 33 is Ser-NH2  
  
 <400> 175  
 His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
 20 25 30  
  
 Ser

<210> 176  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct  
  
 <220>  
 <221> MOD\_RES  
 <222> (32)  
 <223> AMIDATION, Position 32 is Ser-NH2

<400> 176  
 Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
 20 25 30

<210> 177  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct  
  
 <220>  
 <221> MOD\_RES  
 <222> (32)  
 <223> AMIDATION, Position 32 is Ser-NH2

<400> 177  
 His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
 20 25 30



<210> 178  
 <211> 31  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (31)  
 <223> AMIDATION, Position 31 is Pro-NH2

<400> 178  
 His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro  
 20 25 30

<210> 179  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (30)  
 <223> AMIDATION, Position 30 is Gly-NH2

<400> 179  
 His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly  
 20 25 30

<210> 180  
 <211> 29  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (29)  
 <223> AMIDATION, Position 29 is Gly-NH2

<400> 180

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly  
20 25

<210> 181

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> VARIANT

<222> (31)

<223> Xaa is thioproline

<220>

<221> VARIANT

<222> (36)..(38)

<223> Xaa is thioproline

<220>

<221> MOD\_RES

<222> (38)

<223> AMIDATION, Position 38 is thioproline-NH2

<400> 181

His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa  
35

<210> 182

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> VARIANT

<222> (36)..(38)

<223> Xaa is thioproline

<220>

<221> MOD\_RES

<222> (38)

<223> AMIDATION, Position 38 is thioproline-NH2

<400> 182

His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa  
35

<210> 183

<211> 37

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>

<221> VARIANT

<222> (31)

<223> Xaa is N-methylalanine

<220>

<221> VARIANT

<222> (36)..(37)

<223> Xaa is N-methylalanine

<220>

<221> MOD\_RES

<222> (37)

<223> AMIDATION, Position 37 is N-methylalanine-NH2

<400> 183

His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa  
35

<210> 184

<211> 36

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic construct

<220>  
 <221> VARIANT  
 <222> (31)  
 <223> Xaa is homoproline

<220>  
 <221> VARIANT  
 <222> (36)  
 <223> Xaa is homoproline

<220>  
 <221> MOD\_RES  
 <222> (36)  
 <223> AMIDATION, Position 36 is homoproline-NH2

<400> 184  
 Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
 20 25 30  
 Ser Gly Ala Xaa  
 35

<210> 185  
 <211> 35  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (35)  
 <223> AMIDATION, Position 35 is Ala-NH2

<400> 185  
 His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
 20 25 30  
 Ser Gly Ala  
 35

<210> 186  
 <211> 30  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic construct

<220>  
 <221> MOD\_RES  
 <222> (30)  
 <223> AMIDATION, Position 30 is Gly-NH2  
  
 <400> 186  
 His Gly Asp Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly  
 20 25 30  
  
 <210> 187  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic construct  
  
 <220>  
 <221> MOD\_RES  
 <222> (39)  
 <223> AMIDATION, Position 39 is Ser-NH2  
  
 <400> 187  
 Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
 1 5 10 15  
  
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
 20 25 30  
  
 Ser Gly Ala Pro Pro Pro Ser  
 35  
  
 <210> 188  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic constructArtificial Sequence  
  
 <220>  
 <221> MOD\_RES  
 <222> (39)  
 <223> AMIDATION, Position 39 is Ser-NH2  
  
 <400> 188  
 Ala Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
 1 5 10 15  
  
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
 20 25 30

Ser Gly Ala Pro Pro Pro Ser  
35

<210> 189

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> GLP-1[7-36] NH2 peptide

<220>

<223> c-term amidated

<400> 189

His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg  
20 25 30